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The Hastings Popular Lecture
ON
HEALTH AND EMPIRE.

DELIVERED IN THE GREAT HALL OF THE BRITISH MEDICAL ASSOCIATION, ON MARCH 12TH,

BY

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In the Swahili tongue there is a short but pregnant phrase, "Bora Afia," which, being interpreted, means "Health is the chief thing." If, in the history of the British Empire, that adage had been kept constantly in mind, there would have been a very different tale to tell from that which has to be told by anyone who reviews the growth and development of the Power which on the maps encircles the globe in red, and of whose possessions Professor John Wilson, the "Christopher North" of *Blackwood*, was able, one hundred years ago, to write "His Majesty's dominions on which the sun never sets." Alas! the truth enshrined in that wise saying of the Swahilis was to a large extent forgotten when England was carving her way with the sword to world power, as was the advice of that wise man and genial angler, Izaak Walton. "Look to your health," he said, "and if you have it, praise God, and value it next to a good conscience; for health is the second blessing that we mortals are capable of; a blessing that money cannot buy."

It is true that, in the earlier days, our ignorance was such that it was impossible to take proper precautions for the preservation of the health of fighting men, of explorers, and of colonists, but even when some knowledge was forthcoming preventive measures were as a rule ignored, so that, although he is speaking of war and not disease, the words of Oscar Wilde may well apply:

> For southern wind and east wind meet
> Where, girt and crowned by sword and fire,
> England with bare and bloody feet
> Climbs the steep road of wide Empire.

It was indeed a path of loss and misery as well as of glory and of great deeds, a veritable *Via Dolorosa*, and the feet of the conqueror might well be pictured as ensanguined, for the road was strewn with the victims of such haemorrhagic disorders as dysentery, yellow fever, enteric fever, blackwater fever, typhus fever, malignant small-pox, plague, and scurvy. There were others besides, for malaria, heatstroke, liver abscess, relapsing fever, ophthalmia, and pneumonia took heavy toll from both the military and naval forces of the embryo Empire and from the hardly won settlements overseas.

And yet, perhaps, there is another side to the picture; for if, in that great struggle for domination, too much account had been taken of sickness and pestilence, it is conceivable that the goal would never have been attained. Still, there is a great difference between a reasonable care of health and a reckless squandering of life, and time and again the latter was in evidence, and such knowledge as had been gained by bitter experience was cast into the melting-pot.

Historical Aspects.

Lest we forget, and with the view of contrasting the conditions which prevailed during the period of foundation and expansion with those obtaining to-day, it seems desirable to glance briefly at some of those perils to health which our forebears had to face. In doing so we can but wonder at the courage and tenacity which enabled the pioneers of Empire to triumph over disease and death, the while we deplore the needless loss of life, the lack of lore, and the short-sightedness which brought thousands upon thousands to an untimely end.

Let it be remembered that, until comparatively recently, the heart of the Empire itself was far from sound. In the spacious days of the Virgin Queen those who fared forcign encountered diseases with which they were quite familiar at home, though it is true they often encountered them in more terrifying guise than that to which they were accustomed. Unable to cope with them in the Motherland, they were still less able to deal with them abroad, and this, in certain directions, remained true until last century had run much of its course. It must not be forgotten that England was scourged by cholera as late as 1866, and that in 1869 relapsing fever was claiming victims in the poorer parts of London. In 1863 malaria formed the subject of inquiry, for it still persisted to a considerable extent in the fen lands and the marshes.

There was, however, one disease, not often seen ashore, but which dogged the mariner and the gentleman adventurer afloat. This was the sea scurvy, which played havoc with the personnel of the Navy and the mercantile marine, in the old days of sailing ships and long voyages, and before a simple and a single remedy—the addition of lemon juice to the sailor's ration—magically controlled it. Yet it is worth noting, as exemplifying what has already been said, that, although Hawkins saved his crews with lemon juice in the Azores in 1590, it was not until 1844 that it was made a compulsory issue in the British Navy, despite all the efforts of the great naval hygienist James Lind, in the preceding century, and those of his disciples and fellow countrymen Trotter and Blane. It is also worth noting, as showing how Empire-building may favour the ravages of

disease, at least when war is the trowel, that there were no fewer than 10,000 cases of scurvy amongst our Indian troops in Mesopotamia during the last campaign. Truly, "Disease and Empire" would be a better title for this discourse than that which it bears. That such is indeed the case is shown by various happenings throughout the seventeenth and eighteenth centuries It is, of course, impossible to deal with these in detail, but a few examples may be culled at hazard which indicate how correct was Lind, at least with respect to the Navy, when, in the advertisement to his remarkable essay on the preservation of the health of seamen, he wrote:

> "For the number of seamen in time of war, who die by shipwreck, capture, famine, fire or sword, are but inconsiderable in respect of such as are *destroyed* by the ship diseases, and by the usual maladies of intemperate climates."

We have only to turn the pages of *Roderick Random*, and read Smollett's account of the destruction wrought amongst the ships' companies by yellow fever at the disastrous siege of Cartagena, to realize the truth of Lind's contention. He paints in lurid colours with the broad brush, but I think that sometimes the sufferings and dangers of those who were sacrificed in the cause of sea power are better portrayed in those accounts, unhappily only too common, which record individual cases, and thereby bring home more poignantly the tragedy of disease.

Read *An Account of the Diseases of India as they appeared in the English Fleet and in the Naval Hospital at Madras, in 1782 and 1783*, written by Charles Curtis, formerly surgeon of the *Medea* frigate, and, if you know aught of tropical medicine, you cannot but grieve to think of the burden of unnecessary suffering endured, the deaths which need never have occurred, the blind groping in the dark on the part of the physician, the generally hopeless outlook for the patient. The same is true if we turn to Shields's graphic description of the Batavian epidemic of 1800. A small squadron of four British ships was blockading Batavia, for we were at war with the Dutch. On the jungly and marshy island of Edam 60 soldiers were landed at different times, and between October 1st and November 12th 31 died. Of the remaining 29 embarked when the blockade was raised, 22 died at sea; the other 7 were sent to Malacca Hospital, where all or nearly all perished. In short, out of a detachment of 127 officers and men only 62 survived, the rest, as Shields put it, "having fallen ingloriously, without drawing a sword." There is more of this dismal record of fever, and sad but very interesting accounts of the symptoms are given. These closely resembled those of yellow fever, but were undoubtedly due to malaria of a malignant type.

Land operations, more especially in the West Indies, were woefully hampered by losses from fever. It is scarcely credible, but it is none the less true, that within a very short space of years 90,000 British troops perished in and around those fatal islands, almost all from disease due, in no small measure, to ignorance and culpable neglect.

Lest it be thought I deal too much with the Tropics let me recall the disastrous Walcheren expedition, wherein nearly 30,000 officers and men were attacked by fever, and where a mortality of 246.9 per 1,000 strength of troops employed was recorded. The 8,000 deaths due to typhoid fever in the last Boer war show that, even at the beginning of this century, the Empire had to pay heavily for want of any efficient system of prevention, while the records of the Dardanelles, of Macedonia, Mesopotamia, and East Africa prove how difficult it may be in time of war to safeguard the health of combatants.

So much for the Navy and Army. A classical example of a civilian enterprise overwhelmed by disease is to be found in the tragedy of the ill-fated Darien scheme, which, though carried out by a Scottish expedition in 1698, may, for our purpose, be regarded as an attempt at Empire building, as, presumably, had it been successful, the land settled by the colonists would, at the Treaty of Union, have become British soil.

Time does not permit any lengthy account of the sufferings and fate of the unhappy, if courageous, folk who embarked so rashly upon an undertaking foredoomed to failure. The Rev. Francis Borland, one of the chaplains of the expedition, has, in his memoirs, which comment on the lack of skill of the colonists, described in doleful and halting verse the fate of the disease-stricken community, which was attacked by Spaniards and was, from the beginning, an object of envy and hatred to the English traders. Two hundred years later a similar want of skill, due chiefly to lack of knowledge, occasioned, not far from Darien, another melancholy tragedy, when the French failed in their great endeavour to construct a canal across the Isthmus of Panama. It was left to the Americans, the heirs to learning, gained partly by others, partly by themselves, to triumph over malign local conditions.

But it was long before the days of Manson and of Ross that Lady Nugent wrote her *Diary in Jamaica*, a fascinating record of men and affairs, but punctuated throughout by a dreary record of deaths. On one page you meet a gallant officer dining, perhaps not always wisely, and a few pages further on you read of his terribly sudden demise and equally terribly sudden burial. Indeed, the sprightly Lady Nugent is moved to write, "Of late I have omitted to mention illness, for it only makes one melancholy and miserable; but there are, in fact, only three subjects of conversation here—debt, disease, and death. It is, indeed, truly shocking." This, be it remembered, in Government House circles. What must have been the state of things among the lower orders? One more quotation to indicate the enormous toll disease took of those who founded and built up and protected the Empire. Mary Kingsley lived long after Lady Nugent, and wrote of a place far from Jamaica, but there was the same tale to tell. In her *West African Studies*, published, be it noted, as recently as 1899, there occurs this dismal quotation from the *Lagos Standard* for September 7th, 1898:

> "There is no doubt that something should be done to relieve the men [grave diggers] from the strain of the work to which they are continually subjected. The demands of a constantly increasing death rate, which has caused the cemeteries to be enlarged, make it necessary that the number of grave diggers should be increased. No holidays. At it from 6 a.m. to 6 p.m. every day, Sundays included, for the Grim Reaper is ever busy."

Other examples could easily be cited of the price which had to be paid, in the West Indies, in South America, in British North America, for it was not in the Tropics alone that the Reaper was busy, in West and East Africa, in Mauritius, in Iraq, in India, in Ceylon, in Burma—where, by the way, was fought that first Burmese war, which Sir John Fortescue describes as a ghastly and terrible business, and in which five out of every six Europeans perished chiefly from sickness—in Malaya, in China, and in the broad Pacific.

There are few bright spots, for even though at first South Africa, Australia, and New Zealand were healthy places, in the course of development and, in the case of South Africa and New Zealand, during campaigns, disease played its accustomed part, so that, look where we will, we find evidence that the Empire has been built upon the bones of dead men—aye, and of dead women—the majority beyond all doubt victims, not of war, but of pestilence.

Happily there is another side to the shield, and it behoves us to consider how a great change has been wrought, how we have passed from darkness to light, though, at the same time, it is essential to remember that the fight against the forces of disease and death is far from being wholly won. It must also be remembered that if, in the olden days, the Empire paid scant heed to the health of its white populations, it paid even less to that of the native races which passed under its sway, except here and there in the case of slaves, which possessed monetary value. Now, however, it has shouldered the white man's burden, and throughout its length and breadth the care of the health of native communities is a feature of modern administration. What this means is not always fully realized. I have said elsewhere that a skilled and sympathetic doctor is more of a civilizing and pacifying force than a company of infantry, and a well-run hospital has greater power in the long run than a battery of maxim guns.

The change for the better began in this country, though there were not lacking powerful influences abroad, and more especially in India, which, under British rule, has, in certain respects, always been a remarkable centre of medical and hygienic activity. Yet it was the new outlook

in England about the middle of last century, an outlook which resulted from the enthusiasm and the unremitting labours of Edwin Chadwick and his disciples, which laid the foundation of all that followed. The pioneers of sanitary reform preached the gospel of cleanliness, and that comparatively simple evangel accomplished great things, both at home and abroad. The gospel might be a simple matter, but its acceptance by those in high places and by the populace was very much the reverse, even when repeated cholera outbreaks came to the assistance of the reformers, and it needed the most dogged determination to effect a sanitary revolution. A lesser man than Chadwick would have given up in despair, but, aided by Southwood Smith, Simon, and others of like kidney, he would not acknowledge defeat, and well earned the fine tribute paid him in 1890 by another of his followers, Sir Benjamin Ward Richardson.

What Chadwick and the other pioneers did was to place sanitation upon a sound basis, to invoke the majesty of the law on its behalf, and to make obedience to the laws of health an integral part of the life of the people. Naturally, when the efficacy of public health work had become established in Great Britain, those possessions which now constitute the great Dominions were not long in following the lead of the Motherland and putting their respective houses in order. They had their own difficulties, but these were gradually surmounted, and it is not too much to say that nowadays they are in some ways ahead of this country in hygienic activity. Canada, for example, in close touch with the United States, has followed the lead of that enlightened republic in the matter of the preservation and handling of food, a matter in which this country still lags woefully behind. South Africa has instituted on the Rand a remarkably efficient control of the health of miners of which we have no counterpart here. Australia's system of quarantine is, I think, generally regarded as more thoroughly developed, I do not say more effective, than what obtains in England. New Zealand has set us an example in the matter of infant welfare.

On the whole, the problems to be met and mastered in Canada and New Zealand resembled very closely those which this country had to face in its efforts to secure sanitary salvation, but South Africa and Australia had special troubles of their own. Thus from 1889 onwards South Africa had to cope with plague, and, of late years, its plague problem has assumed special features, and has presented peculiar difficulties owing to the infection of the veld rodents. In Australia, and also in New Zealand, the prevalence of hydatid disease, due to a parasitic worm, has introduced questions and measures which are unfamiliar in the Old Country; plague in Australia was at one time a cause of trouble and expense; while the fact that a considerable part of the Australian continent is within the tropic zone has necessitated attention being paid to the matter of acclimatization and to the prevention and cure of ankylostomiasis. In both South Africa and Australia the leper problem had to be faced, so that in both these Dominions conditions were somewhat specialized.

It is, however, only when we turn to India and the Colonies, for the latter are nearly all tropical, that there is impressed upon us the fact that, until science had led the way, the physician was terribly handicapped in his efforts to cure disease, while the hygienist was also hampered and perplexed, although it is true that, by following the lines indicated by the pioneers, and adopting cleanliness as his slogan, he was able to accomplish much in the way of prevention and amelioration. For example, it was not necessary to wait until sundry parasites had been discovered, certain vectors of disease identified, some life-cycles of lowly organisms worked out, before remedying conditions like those of which David Livingstone wrote pungently in his *Last Journals*:

"The stench from a mile and a half to two miles of sea-beach, which is the general depository of the filth of the town, is quite horrible. At night it is so gross or crass that one might cut out a slice and manure a garden with it; it might be called Stinkibar rather than Zanzibar. No one can long enjoy good health there."

To do this country justice, she usually cleaned up places on which she laid her claws, at least after she had learnt to keep herself clean, or, in view of present conditions, should we say fairly clean? Furthermore, the physicians of the olden days were not devoid of sound ideas on the subject of personal hygiene. You have only to read Sir Hans Sloane's mighty tome on the West Indies, James Grainger's wise essay on the diseases of these same islands, or Part III of James Johnson's admirable compilation, *The Influence of Tropical Climates on European Constitutions*, wherein he treats of dress, food, drink, exercise, sleep, and the control of the passions, to realize what experience and common sense could dictate.

Yet, viewing the situation broadly, it may with truth be said that it was not until the new era of tropical medicine dawned, with its surprising revelations and its vistas of hope and of health, that any remarkable progress was made either from the purely medical or from the purely sanitary standpoint. Perhaps the most outstanding example of results following upon the heels of research is to be found in what occurred at Malta. The organism of undulant, or, as it used to be called, Malta or Mediterranean fever, had been discovered by Sir David Bruce in 1888, but it was not until 1905–6 that a commission of the Royal Society investigated the problem of a malady which was a veritable curse, for, though it did not kill many sailors and soldiers, it kept large numbers of them in hospital, and led to prolonged disability. The loss in personnel and in money was indeed very serious. The labours of the commission, following the lead given by Dr. (now Sir T.) Zammit of the Malta Board of Health, who was himself appointed a member of the commission, conclusively proved that the path of infection lay through the goat. In other words, the milk of infected goats transmitted the disease to man. Precautionary measures were at once taken, and within a year the disease had been practically eradicated from the Navy and Army.

Let it be clearly understood, however, that we must not attribute all the advance of recent years to discoveries like those of Theobald Smith on Texas fever, Bruce on undulant fever and trypanosomiasis, Manson on filariasis, Ross on malaria, and so forth. Other factors were at work, such as the realization of the value of the Tropics as a source of raw material for the Empire, improved transport both by sea and land, improvement in the diffusion of information, greater interest in native races, the strategic importance of certain places from a military and naval standpoint, better food conditions, more comfort, and a lessened consumption of alcohol. In short, the Tropics in one sense became the fashion. European nations, and even the United States, scrambled for them, and, as vested interests developed, so did the necessity of spending money and of educating the indigenous populations.

In such circumstances it is clear that India could no longer tolerate conditions like those which obtained in former times, when, as Dr. Busted tells us, the white citizens of Calcutta were wont to meet after the rains under the great banyan tree in the Maidan and congratulate themselves that they were still alive. As a matter of fact, India had already passed far beyond this stage, for, as has been stated, she had been well served by medical officers and research workers, both in the Indian Medical Service and the Army Medical Service, and had benefited especially from the light thrown upon the method of spread of cholera by John Snow in London, von Pettenkofer in Munich, Bidie, Parkes, Duncan, and others in India, as well as by Koch's discovery of the cholera vibrio, the cause of the disease. Moreover, in the case of the large European cities, money had not been lacking even for those Cinderellas of municipal expenditure, sanitary improvements, so that by the time research began to clear up some of the more important mysteries in tropical pathology India was on rather a different footing from the other parts of the Empire. Whether she made the best use of her advantages in this respect is quite another question, but it must always be remembered that in India health problems are on a vast scale, and that the difficulties are enormous.

Under the process of settlement and expansion to which reference has been made, the dreaded West Coast of Africa could no longer remain the white man's grave, as it had with justice been called throughout the eighteenth and much of the nineteenth century. No longer was it conceivable that the average tenure of office for Government officials should be less than twelve months. No

longer was there any need for a judge to devise the ingenious expedient of making his home on a small vessel moored off the coast, and going ashore only to carry out his official duties. No longer could the gravestones in the cemeteries and the memorials in churches be permitted to exhibit record after record of unfortunate persons who had perished under the age of 40. Civilization altered the situation, and it is worth noting that the British Empire as a civilizing and colonizing power has been a good ally to health. At least we may say that the balance is on the right side, for, of course, this very process of trade expansion and settlement has resulted in terrible tragedies. Diseases have been introduced which have decimated native populations. Think of the malign influence of the slave trade, in which Great Britain for so long participated, the horrible state of the slave ships, in which too often dysentery and ophthalmia were rife, the probability that yellow fever was introduced into the New World by this iniquitous traffic. Still, when all is said and done, imperial development has, on the whole, brought about hygienic improvement, and incidentally I may say that, personally, I believe this process of "bonifaction," as the Italians call it, will prove the main factor in conquering such diseases as malaria and African sleeping sickness. Yet those researches to which allusion has been made, or at least some of them, had an influence apart from their intrinsic value. Once the role of the mosquito as the vector of the parasite of malaria had been demonstrated, and the truth of Manson's malaria-mosquito hypothesis established, a wave of intense interest and of hopefulness passed over most of those associated with the Tropics, though, as ever, scoffers were not lacking. There was something romantic about the idea, and the discovery seemed to hold out vast possibilities. Attention was thereby drawn to tropical latitudes, and, in fact, the very controversy which arose proved beneficial.

A similar, and even greater, outburst of enthusiasm, at least in certain circles, followed the American proof that the virus of the dreaded yellow fever was mosquito-borne, and the demonstration by Gorgas, in Havana, that the new knowledge had placed in our hands effective methods of prevention and control. Much the same stimulation resulted from the finding that the tsetse fly, known to the British public from the writings of David Livingstone, was responsible for the spread of that negro lethargy or sleeping sickness, the nature of which had been for so long a time enveloped in mystery, and which had wrought such havoc on the shores of the Victoria Nyanza. It was clear that at last we were getting to grips with those tropical maladies which had been one of the chief factors preventing the opening up of Africa and the exploiting of other regions, some of vast potential wealth, within the torrid zone. Pray do not imagine that I wish in any way to belittle the importance and value of the researches themselves. I merely wish to emphasize what we may call their indirect results, which quickened and strengthened the effects of that process of civilization and expansion to which I have referred.

Present-day Conditions.

Having briefly, and withal inadequately, surveyed the historical aspect of the question, let us turn to present-day conditions, and endeavour to get some idea as to what the term "Health and Empire" now connotes. Presumably it has various meanings. It may mean, and does mean, that health is a factor in achieving and maintaining empire; it may signify, and does signify, that the Empire is responsible for the health of the peoples under its flag; it may indicate, and does indicate, that the first wealth of the Empire is health. The subject is so vast and complex that it is only possible to touch upon some of its more salient features. It seems desirable to commence with the Home Country, for unless the heart be sound there can be no security for the body generally, or, to change the simile, if the trunk be rotten the branches will suffer sooner or later.

We consider the Home Land, of course, only in its imperial relationships, but these connote many of its own pressing problems. There is the question of emigration, and naturally it is important to see that we send a healthy stock to our overseas possessions. We once used to dump convicts in Australia, and, until comparatively recently, it was a common custom to dump the unfortunate victims of pulmonary tuberculosis on the South African Karroo, while of late years not a few have been sent to the highlands of Kenya. Doubtless this was done with a view to curing them, but the principle is bad. The Dominions and the Colonies want our best from the standpoint of health, and should get them. It is surely wrong to supply what may be called "damaged goods" to add foci of infection to those already in existence overseas.

Happily precautions are taken in the case of Government officials and employees proceeding to the Colonies, employees and representatives of business houses destined for the Tropics, and also, where emigration on a larger scale is carried out, through approved channels. Closely bound up with this question of a healthy stock is that of maternity and child welfare and the medical care of school children. Just as the Jesuit recognizes that he can best implant his tenets in the young mind, so the hygienist is now convinced that, to get the best results, the seeds of health must be sown in the early years of life. Damage is too often irretrievable, and a damaged stock cannot serve the Empire to the best advantage.

Then there is quarantine and port health work. I wonder how many men in the street know what is done to guard this country against diseases "coming foreign," as a sailor would say. The public as a whole knows little of the system of information whereby the Ministry of Health and the Colonial Office are notified about infected ports, of the constant watch and guard that is kept at our own shipping centres to prevent the introduction of a disease like plague, of deratizations and disinfections and disinfestations that are constantly being undertaken, of the whole machinery which moves and has its being under the aegis of the yellow flag. It is imperial work, but, like that of the Navy, it is silent and unobtrusive. Yet were it suspended or negligently pursued there would be a certainty of trouble, even though we can now rely upon our second line of defence, the general public health service, to avert anything in the nature of a disaster. Plague may gain a footing, but only one which is precarious and evanescent; cholera is very unlikely to get a footing at all.

Great Britain, together with Greater Britain—for the self-governing Dominions, the Irish Free State, and India come into the picture along with it—also safeguards its health through its association with the Health Section of the League of Nations. Great Britain especially benefits from this co-operation, and plays an important part in the Councils of Geneva and Paris. It supplies information, it receives information, it conducts negotiations with respect to legal enactments of an international character, its representatives attend health conferences and issue reports, all with the object of protecting the health of the lieges and of advancing knowledge in health matters.

Most people realize that in the matter of food supply this country is not self-supporting. It relies in very large measure upon its imports, and, in the case of certain articles of diet, stringent precautions have to be taken to ensure that they will not prove deleterious to the health of the people. Now it is obvious that the more our supplies come from imperial sources, the better able will we be to exercise control, and, I think it is probably fair to add, the more likely are we to obtain sound and reliable material. Hence "Health and Empire," so far as Great Britain is concerned, is intimately bound up with our food supplies; and food, as we are learning more and more, is probably the most important factor of all in the attainment and preservation of both bodily and mental health.

Lastly, there is education. Only two generations of people in this country have had the benefit of free compulsory education, while education in public health matters is a very recent development of school life. Every citizen should know something of the Empire to which he belongs, understand how it came into being, what it represents, how it holds together, what it is trying to do, what it produces, where it is weak, where it is strong, and what problems it has to face. Among the problems are its health problems, and the citizen should have some idea of what these are and how they affect the Empire as a whole, and

himself in particular; for, strange though it may seem, both his pocket and his welfare may be considerably affected by some epidemic raging overseas or by the persistent attacks upon native labour of some widespread debilitating malady in the Tropics, as, for example, malaria or hookworm disease.

It goes without saying that every taxpayer in Great Britain should take an intelligent interest in the laws of health, understand how he lives and moves and has his being, appreciate his duties in health matters towards his neighbours and to the State, and realize why some of his money is spent for public health purposes and how it is spent. He will find that some of it, no doubt an infinitesimal fraction, but still some of it, is going to promote the cause of health in the Empire, and he should be, though he may not be, proud of the fact.

Again, education in health matters, especially if properly imparted during school days, should tend towards the production of a sound stock, such as is required both at home and abroad. The Empire has what we may call a spiritual side. Healthy sentiment, enthusiasm, and idealism count for much. So does rectitude, and here we may fittingly recall the saying of Jean Jacques Rousseau: "Hygiene is less of a science than a virtue." Above all, there is genius, that priceless gift, conspicuous by its rarity. Those who inveigh against the indiscriminate saving of infant life and prophesy disaster from such activity, would do well to reflect that if there be one genius in half a million saved, the saving of that half-million has been justified. Think of what some men of genius might have done for the Empire had they not been cut off early by illness. Sir Stamford Raffles, the founder of Singapore, died at 45. Clive was but 49 when a diseased body, reacting on a harassed mind, led him to take his own life. Death claimed the worn and emaciated frame of William Pitt before he had completed fifty years of existence. Or, to look at it from another angle, how great would have been the Empire's loss, so far as can be told, had Cecil Rhodes perished in his youth from the pulmonary tuberculosis which drove him to the Cape! But the Empire needs not only the administrator. All works of genius are of value to it if only because it can point with pride to its sons who have produced them, for legitimate pride is a source of power.

The Empire cannot afford to trifle with health, and this country must continue and extend its labours in the service of the goddess Hygeia. Its greatest link with the overseas possessions is its trade, and daily there come and go those argosies of commerce which spell wealth and security. Yet it is to be feared that due consideration is not accorded the health of those who man our merchant ships. True, things are better than they were, but the position, on the whole, remains unsatisfactory. I have had some opportunity of seeing the conditions under which our seamen live and serve afloat, and of comparing them with those obtaining in the ships of other maritime nations, as, for example, Sweden and the United States, and I cannot say I have been favourably impressed. Others, with greater experience, have dealt with this matter and published facts and figures there is no disputing. When, we may well ask, is the Ministry of Health to be made responsible for the health and welfare of those men on whom so much depends, and who rendered such yeoman service in time of trial? This is undoubtedly an imperial question, and so, as in the old days, is the health of our fighting services, though nowadays the Royal Air Force has to be added to their number. The subject is one on which we need not linger, for knowledge, based on experience and research, has revolutionized the medical state of the Navy and Army, while the Air Force, begotten late, found itself heir to modern methods and ideas, and further devised ingenious means of dealing with the special health problems of its gallant personnel, means founded on acquaintance with the new physiology, the new biochemistry, and the new psychology.

For a time the study of hygiene lagged a little in the Navy, and our research work was scarcely equal to that of the United States; but of late the Navy has forged ahead, and most valuable epidemiological work and the publication of an excellent textbook on naval hygiene show that disciples of Lind and Trotter and Blane are not lacking in these latter days.

The Army, by means of its special committees, notably those on hygiene and pathology, keeps close watch on all conditions affecting the health of troops both at home and abroad. One has only to compare present-day statistics with those of the Victorian era to appreciate how great a change has been wrought in the health and welfare of the British soldier. Most of it is a comparatively recent development, for, apart from the labours of certain pioneers, it was not until after the Crimean war that the Army became, as it were, officially connected with preventive medicine. Yet that all is not well, at least as far as the army in India is concerned, must be apparent to anyone who studies Lieut.-Colonel J. Mackenzie's interesting and recent work on *Military Hygiene and Pathology in India* and his list of disabling diseases.

"Imperial Diseases."

Let us extend our range of vision to the Empire as a whole. For our purpose "imperial diseases" may be defined as diseases transferable in a variety of ways from the sick person, or from the so-called healthy carrier, to the sound, existing as endemics, pandemics, or more especially as epidemics, and possessed of such crippling and lethal powers that, taking the British Commonwealth as a whole, they interfere with progress and development, hinder trade and commerce, and occasion monetary loss. The first of the diseases of this class to which reference will be made is not in Colonel Mackenzie's list, for nowadays it does not claim many victims among British soldiers in India. Tuberculosis, however, stands pre-eminent. Information regarding it and its ravages is so widespread that, here, I mention it merely to remind you that in many parts of the Tropics it is as potent a crippler and slayer as it is in this country. One has only to read the recent survey by Roesle of Berlin to realize the truth of this statement. It could not well be otherwise, for it is in the main a disease of malnutrition, overcrowding, and faulty housing, and all these conditions exist in tropical as well as in temperate climates. It is no easy matter to combat tuberculosis in the Tropics, but the first step in the campaign where indigenous populations are concerned is education, and this has been undertaken in most of the Colonies where there are organized public health services.

Venereal disease is, unhappily, on Colonel Mackenzie's list, and competes with malaria and tuberculosis for one of the first three places in the roll of imperial maladies. There are at least four forms, and one of them is a killing disease, though it usually takes long to kill. So long as "the hidden hand in pathology," as Sir James Crichton-Browne has so aptly called syphilis, claims victims far and wide throughout the Commonwealth, the Empire's health cannot be viewed without grave concern. Happily it is being fought now as never before, and the methods elaborated in this country are pursued in many of the overseas possessions, while a very gratifying feature is the way in which the questions of these social maladies as they affect our merchant seamen are attracting attention and leading to measures for their control and cure. Painstaking research has accomplished a great deal in aiding us to grapple effectively with venereal disease in all its forms, and we have here a gratifying example of the practical application of the fruits of research in a manner which is undoubtedly of benefit to the Empire as a whole.

Would that the same could be said about malaria, the pestilence which flieth in darkness, as it may not inaptly be termed, but, though it is many years since the mystery which enshrouded it was dispelled by the intuition of Patrick Manson and the unremitting labours of Ronald Ross, it still exacts a terrible toll, cutting short useful if humble lives, sapping energy, altering mentality, leading directly and indirectly to poverty and wretchedness, wasting time, and wasting money. A malaria-sodden population is a sad sight—bloodless, breathless, listless. There you find tired minds in tired bodies, and under these conditions there can be no efficient labour.

We have not as an Empire done our best to cope with malaria, even though the difficulty of the task is admittedly enormous. Here and there the method of Ross—the method

of dealing with the insect vector of the disease—can be pursued with advantage. Here and there it *has* been pursued with advantage, and remarkable results have been obtained. Nevertheless the method has in many places been neglected or not applied with the thoroughness, energy, skill, and, shall we say, enthusiasm which it demands for complete success. We can take a lesson here from what is being done in Italy and in the southern States of America. Yet, as has already been said, the chief foe to malaria is the progress of civilization. Colonel James of the Ministry of Health, an authority on the subject, is of opinion that the diminution of local malaria in England was due "to progressive improvements of a social, economic, educational, medical, and public health character." Barber has shown that the same factors have been operative in freeing to a large extent the northern United States from the disease which formerly held them in thrall. It is interesting to note that, away back in 1863, Professor Christison of Edinburgh, when mentioning that it was generally believed that the disappearance of ague in Scotland was the result of drainage measures incidental upon agricultural improvement, pointed out that, in at least one district, it was known that ague had all but vanished before any modern drainage had been undertaken. He recorded the opinion of a country doctor that the real cause of the change was the improved living conditions among farm labourers. Christison, an able and astute man, advocated an inquiry into the reasons which had led to the disappearance of ague from Scotland, and said:

"The results may be of great consequence. Many of our colonies are now overrun with ague, and its sister remittent fever. It can scarcely be that a successful inquiry into the agencies by means of which ague has been extirpated from Scotland should fail to be of service to our countrymen towards freeing also from that scourge the lands of their adoption."

Wise words! Yet despite the discovery of Laveran, the reasoning of Manson, the "crowning mercy," as Ross's revelation may be called, and the remarkable and supplementary work of the Italian observers, much of what Christison said remains true to-day. The mouse, we know, aided the lion, but something infinitely smaller than any mouse worries and perplexes the British lion year in and year out. It is our duty, an imperial duty, to combat malaria by every means in our power, even though we need not fear that the fate which befell ancient Greece will spell our ruin. Yet surely we cannot contemplate with equanimity an Empire on which the sun never sets without infected anopheline mosquitos commencing their infamous work and transmitting the stealthy plasmodium of malaria from the sick to the sound.

Ankylostomiasis, that insidious malady due to the hookworm, often proves itself a veritable blight. There is scarcely any subtropical or tropical part of the Empire which is free from it. It is a foe to be fought upon a large scale, for, although it does not kill its millions as does acute malaria, it saps energy like chronic malaria, and is often most inimical to labour. The Americans, imbued as they so frequently are with high ideals in matters hygienic, have rendered a great service to the British Empire by those widespread anti-hookworm campaigns organized, and in large measure financed, by the International Health Division of the Rockefeller Foundation. Very rightly, however, that Foundation has great respect for the old adage, "God helps those who help themselves," and it plays the part of Providence upon conditions. In most places our Colonies have loyally fulfilled the conditions by contributing so far as in them lay, but sometimes they have failed to continue the good work when outside help was withdrawn. Such a policy is to be deprecated, and leads not only to loss of money, but to lack of faith in measures which have proved their worth. "Persistence pays" should be the motto in grappling with ankylostomiasis, a condition which occasions enormous losses and renders the lives of millions of agricultural labourers a burden, a burden which not infrequently is only appreciated when, by efficient treatment and appropriate hygienic measures, it has ceased to plague them.

Cholera, dysentery, enteric fever, influenza every now and then, plague, pneumonia, and, in some places, including, to our shame be it said, Great Britain, small-pox, all take rank as imperial diseases. Others might no doubt be added to the list, but sufficient has been said to indicate how the health of the Empire is imperilled by them, and how necessary it is to be up and doing.

Yet these, though perhaps the most spectacular, are by no means the only foes which have to be faced and fought. There is a host of other malign influences at work, common alike to the temperate and the tropical parts of the Empire. Perhaps the most important are those which centre round the question of nutrition. One and all occasion inefficiency and monetary loss. There is no time to deal with them in detail, but a single minor example will give food for thought. Jamaica has of late years been waking up in all matters affecting the public health, and in the excellent little journal published by its Central Board of Health and edited by the Bureau of Health Education there was recently an article on the cash value of dental clinics in that colony. It cites figures contrasting the cost of dental work carried out by the clinics with that which would have been incurred had the same work been done privately, and shows that, while a parish dental clinic would cost the parish about £375 per annum, the parish might reasonably expect a return in current dental prices of £1,733—that is to say, four pounds ten shillings for every pound expended.

This is only one instance of how hygiene pays. If all the monetary loss which ill-health occasions throughout the Empire could be checked there would no longer be any trouble about reparations or the National Debt. Unfortunately these burdens are never likely to be removed in this manner, but it is well to take stock of what is being done and what ought to be done to lighten the load. The survey must perforce be brief and imperfect. Indeed, it will be limited to a few outstanding features, but, even so, may prove helpful by indicating that, though there is undoubted activity in many directions, some of this activity is ill directed and that there is room, nay, a crying need, for more intensive and better organized work.

Yet much has been done. Taking first the diffusion of information, we find both the Ministry of Health and the Colonial Office active in this respect. The Ministry has an Intelligence Division containing a lay section, while the Colonial Office has its Bureau of Hygiene and Tropical Diseases, which issues a *Bulletin of Hygiene*, useful alike to medical officers at home and abroad, a *Bulletin of Tropical Diseases*, which is invaluable to the practitioner, the health officer, and the research worker in tropical and subtropical regions, and a *Tropical Veterinary Bulletin*, which reviews and summarizes books and scientific articles, many of which have a very distinct bearing on the health of the Empire. The library services of the London School of Hygiene and Tropical Medicine assist the anxious inquirer both at home and abroad, and is always ready to advise and guide, so far as possible, the genuine seeker after knowledge in health matters.

In this country and in the great Dominions voluntary agencies of various kinds preach the gospel of health more or less effectively in various ways, while in the Colonies, as has already been indicated, the medical and health departments, and other departments dealing with different branches of science, are beginning very seriously to undertake the health education of their inhabitants.

I cannot quit this question of the diffusion of information without paying a tribute to the memory of Sir Charles Hastings, in whose honour this lecture is delivered. When he founded that Medical Bible, the *British Medical Journal*, he probably built better than he knew, far-sighted visionary though he was; for, away back in 1832, he could scarcely have realized what a force that organ of the British Medical Association was to prove as a disseminator of knowledge throughout the length and breath of the British Commonwealth.

Turning now to the education of those specially charged with the preservation and restoration of health, there is a movement afoot to permeate the medical curriculum, as Sir George Newman puts it, with the preventive idea. It has made greater progress in the United States than in this country, but let us hope it will not be abandoned, for it is a sound conception, difficult of execution no doubt, but withal essential, if the doctor of the future is to be a trusted and valued ally in health campaigns. The estab-

lishment of the London School of Hygiene and Tropical Medicine marked the commencement of a new era in post-graduate public health education in this country, and it has also an imperial aspect, the full significance of which will only be apparent as the years pass, and more and more of those trained on new and approved principles take their places in the fighting line, both in this country and overseas.

To Manson we owe the idea of special schools in England for training the medical man and woman in the control and care of diseases of the Tropics or ever he or she fares foreign. London and Liverpool have done much in this direction in the past, and the University of Edinburgh, always a pioneer in matters of medical education, has recently reorganized and extended its courses of instruction in tropical medicine and hygiene. An important development in connexion with the London School is the institution of courses in tropical hygiene for laymen and laywomen. Those who attend them will not enter upon tropical life unprepared, and will exemplify the truth of the saying "Forewarned is forearmed." The value of the graphic museum as a means of demonstrating all that "Health and Empire" connotes has been recognized at the London School and also at the Wellcome Bureau of Scientific Research, while it is gratifying to note that museums of this kind are springing up here and there in the Colonies where, properly conducted, they cannot fail to assist the great cause.

Hospitals for tropical diseases, like that of the Seamen's Hospital Society, play an honourable part, not only by helping the sick, among them many servants of the Empire, but by providing clinical material for teaching purposes and by quickening the interest of many in the welfare of our tropical possessions. Despite the influx of medical men and women into these parts of the Empire the old cry still holds good, "What are they amongst so many?" and hence we view with sympathy the extension to Africa of a system of medical training for the native, which has proved its value in Ceylon, Singapore, and Fiji. This again is imperial work, and cannot fail of its effect if only it be carefully and faithfully prosecuted, as would appear to be the case in Khartum, where good progress is reported. Lastly, mention should be made of the useful and widespread activities of the Royal Sanitary Institute, both at home and abroad, in the way of training and examining those desirous of becoming sanitary inspectors, and thus constituting themselves links, and very valuable links, between the medical officer of health and the population for whose welfare he is responsible.

Research and Practice.

And now as to research, that much abused word, and yet that weapon which, wisely yielded, has opened up, and can open up, for us paths in the jungle of ignorance, dispelling darkness and gloom, and revealing vistas of hope and cheerfulness, which, in their turn, conjure up visions of health and longevity. In Great Britain there are many centres of research, but I will refer only to the ceaseless and ever-increasing investigations of the Medical Research Council, which have already resulted in discoveries, some of which are of vital importance to the health of the Empire. As Sir Walter Fletcher has said, it is surely a fascinating thought that at any moment some piece of work in the laboratory or in the field in this country may profoundly influence communities existing under totally different conditions thousands of miles away. Yet it is true, and so is the converse, for research is proceeding in many parts of the British Empire. Moreover, serious efforts are being made to co-ordinate it. India was somewhat of a pioneer in this matter so far as research work within her own vast territory is concerned, and now the report of the Fletcher Commission has indicated further, and presumably better, lines of development. To help research in the Colonies a special Colonial Medical Research Committee has been established, and is beginning to make itself felt.

Indeed, in every direction we can chronicle activity, if not marked progress; but it is necessary to sound a note of warning. Research has outstripped practice. We are not applying properly much of the knowledge we have gained. What is the use of proclaiming new truths if we do not turn them to practical account? Unless their value is demonstrated they will become discredited. It is no wonder that scoffers still exist when, in so many places, disease holds its own simply because our hard-won knowledge is not utilized. Many examples could be cited, but I will mention one only.

Research and experience have shown the absolute necessity of laboratory aid in the diagnosis of many tropical diseases, and yet in some Colonies there exist hospitals without clinical laboratories, or, if they possess some sort of a laboratory, there is no medical officer with the training or the time to utilize such facilities as do exist. A wrong diagnosis may mean the loss of a life or a prolonged illness, and at the best often means that time is lost and money is wasted. The educated layman, reading of the marvels of modern medical discovery, must himself marvel at the neglect to take advantage of them. What we want are demonstration centres here and there throughout the Empire to show what can be done when all our resources are pooled and the forces which make for disease and death are attacked from every side with every tried and proved type of medical and sanitary armament. This is not a vain dream. Something of the kind has already been attempted, notably in the United States, and the results have been striking and startling. Again, at our training centres we want a sufficiency of staff, so that, whenever required, men trained in research or in public health work will be available at short notice to proceed abroad and grapple with some problem or advise in some difficult and dangerous situation. Above all, we must continue day in day out to declare that hygiene pays, and to be prepared to demonstrate the truth of that dictum, but there can be no great and lasting success unless we can count upon the sympathy and help and co-operation of all that vast community which owes allegiance to the Flag.

British Medical Association.

CURRENT NOTES.

Annual Meeting, Winnipeg, 1930.

Travelling Arrangements.

We give below revised particulars of the three tours that have been arranged.

Tour C will occupy 49 days, leaving Liverpool on August 8th and returning to England on September 26th. The cost per person is approximately £161 10s., and the itinerary is as follows: Quebec, Montreal, Toronto, Hamilton, Niagara, Timmins, Winnipeg, Saskatoon, Edmonton, Jasper, Vancouver, Kamloops, Golden, Emerald Lake, Lake Louise, Banff, Regina, Fort William, Sault Ste. Marie, Port McNicoll, Toronto, Ottawa, and Montreal. For members who wish to visit the United States an alternative return has been arranged to this tour, by which, after reaching Winnipeg on the return journey, passengers will proceed south via Minneapolis, Rochester, Chicago, Philadelphia, and New York, leaving Montreal on September 19th and reaching England on the 26th. The cost of the whole tour (C 1) with the alternative return is approximately £170 5s. With an additional week to include Cincinnati, Charleston, and Washington, departure from New York, the approximate cost is £186 6s.

Tour B will occupy 35 days, leaving Liverpool on August 8th and reaching England again on September 12th. The cost per person is approximately £110 15s., and the itinerary is as follows: Quebec, Montreal, Toronto, Hamilton, Niagara, Port McNicoll, Sault Ste. Marie, Fort William, Winnipeg, Iroquois Falls, Timmins, Ottawa, and Montreal. An alternative return following the same itinerary as Tour C 1 has been arranged for Tour B, and will leave Montreal on September 5th, reaching England on the 12th. The cost of Tour B 1 with the alternative return, is approximately £121 19s. 2d. With an additional week to include Cincinnati, Charleston, and Washington, departure from New York, the approximate cost is £143 12s.

Tour A has been designed to meet the convenience of those who can spare only 28 days. Members who join this tour leave Liverpool on August 15th and return to England on September 12th. The cost per person is approximately £96 10s. Winnipeg is reached by direct route from Montreal via Fort William, and the return journey is via Sault Ste. Marie, Port McNicoll, Toronto, Niagara Falls, Ottawa, to Montreal.

The alternative return from Winnipeg follows the same route as Tours C 1 and B 1 and leaves Montreal on September 5th,

reaching England on September 12th. The cost of Tour A 1 with the alternative return is approximately £109 17s. 6d., or £136 2s. with the additional week.

There are prospects of an alternative or additional tour being arranged through Nova Scotia and the Maritime Provinces, with Halifax as the port of embarkation.

Further particulars of the tours may be had from the Financial Secretary and Business Manager, B.M.A. House, Tavistock Square, W.C.1.

Appointment of Assistant Medical Secretary.

The Council of the British Medical Association, at its meeting on February 5th, decided to advertise, after its meeting in April, for an Assistant Medical Secretary, who will be expected to take office not later than January, 1931. Full particulars as to the qualifications required of the official cannot be given until the Council has settled at its meeting on April 2nd the terms of the advertisement, but it has been thought desirable to issue a preliminary notice for the benefit of those who may think of applying. The salary will be £1,000 per annum.

Flags in the Great Hall.

The British Medical Association has received another addition to the flags which are so prominent a feature of the decoration of the Great Hall in the House of the Association. The new flag has been presented by the Bath Division. It is of handsome design, showing the Arms of the City of Bath on a blue ground, and the years in which meetings have been held there—namely, 1838, 1848, 1878, and 1925.

Association Notices.

BRANCH AND DIVISION MEETINGS TO BE HELD.

BIRMINGHAM BRANCH: NUNEATON AND TAMWORTH DIVISION.—A meeting of the Nuneaton and Tamworth Division will be held at the Nuneaton General Hospital on Wednesday, March 19th. Dr. L. G. J. Mackay will read a paper on focal sepsis.

LANCASHIRE AND CHESHIRE BRANCH: BLACKPOOL DIVISION.—A meeting of the Blackpool Division will be held at the Metropole Hotel, Blackpool, on Wednesday, March 19th, at 8.30 p.m., when an address will be given by Mr. Kenneth M. Walker, on the mechanism and treatment of prostatic obstruction. At 7.30 p.m., prior to the meeting, there will be a dinner at the hotel (price 5s.); cars can be garaged in the hotel grounds. Members proposing to attend are requested to notify Dr. E. W. Rees Jones, Public Health Department, Blackpool, by March 18th.

LANCASHIRE AND CHESHIRE BRANCH: HYDE DIVISION.—A meeting of the Hyde Division will be held at the Stalybridge Town Hall on Wednesday, March 19th, at 8.30 p.m. Short papers will be read by members of the Division, which will be followed by a discussion.

LANCASHIRE AND CHESHIRE BRANCH: MID-CHESHIRE DIVISION.—A British Medical Association Lecture will be given at the Altrincham General Hospital on Wednesday, March 26th, at 8.30 p.m., by Dr. E. P. Poulton, on allergy or sensitization and its relation to the treatment of asthma and rheumatoid arthritis.

LANCASHIRE AND CHESHIRE BRANCH: SOUTHPORT DIVISION.—A meeting of the Southport Division will be held in the Assembly Room at the Prince of Wales Hotel, on Thursday, March 27th, at 8.30 p.m., when a British Medical Association Lecture will be delivered by Professor D. P. D. Wilkie on surgery in relation to diseases of the colon.

LANCASHIRE AND CHESHIRE BRANCH: WIGAN DIVISION.—A meeting of the Wigan Division will be held to-day (Friday, March 14th), when Dr. Dougal will discuss gynaecology.

METROPOLITAN COUNTIES BRANCH: CITY DIVISION.—A clinical meeting of the City Division will be held at the Metropolitan Hospital, Kingsland Road, E., to-day (Friday, March 14th), at 4.30 p.m. Mr. F. C. W. Capps will discuss ear and throat cases.

METROPOLITAN COUNTIES BRANCH: FINCHLEY DIVISION.—A meeting of the Finchley Division will be held at the Finchley Memorial Hospital on Tuesday, March 18th, at 8.45 p.m. Dr. W. Sheldon will read a paper on rheumatism in childhood.

METROPOLITAN COUNTIES BRANCH: HARROW DIVISION.—A meeting of the Harrow Division will be held on Tuesday, March 25th. Mr. H. D. Gillies will read a paper on plastic surgery, illustrated by lantern slides.

METROPOLITAN COUNTIES BRANCH: KENSINGTON DIVISION.—A general meeting of the Kensington Division will be held at the Kensington Palace Mansions Hotel on Wednesday, March 19th, at 8.45 p.m. An address will be given by Dr. J. F. Halls Dally on arterial pressure from a clinical aspect.

METROPOLITAN COUNTIES BRANCH: LEWISHAM DIVISION.—A meeting of the Lewisham Division will be held at the Town Hall, Catford, S.E.6, on Tuesday, March 18th, at 8.45 p.m. Dr. J. L. Livingstone (King's College Hospital) will read a paper on some points in the investigation and treatment of asthma in children.

METROPOLITAN COUNTIES BRANCH: SOUTH MIDDLESEX DIVISION.—A meeting of the South Middlesex Division will be held at St. John's Hospital, Twickenham, on Wednesday, March 19th, at 3.30 p.m., for general business. At 3.45 Dr. L. H. T. Walton (St. Thomas's Hospital) will speak on manipulative surgery.

METROPOLITAN COUNTIES BRANCH: STRATFORD DIVISION.—A meeting of the Stratford Division will be held on Tuesday, March 18th, at 9.15 p.m. in the Board Room of the Education Offices, The Grove, Stratford. Dr. Frederick J. McCann, consulting gynaecologist to the West End Hospital for Diseases of the Nervous System, will open a discussion on the influence of birth control on the health of the female. The golf handicap competition for the Wilson cup will take place at Thorndon Park on Sunday, May 18th, at 1 p.m. Members wishing to enter are requested to send in their names at once to Dr. Wilson, 243, Romford Road, E.7.

METROPOLITAN COUNTIES BRANCH: WESTMINSTER AND HOLBORN DIVISION.—A general meeting of the Westminster and Holborn Division will be held at Romano's Restaurant, Strand, on Tuesday, March 18th, at 9 p.m. Dr. W. S. C. Copeman will read a paper on the modern treatment of arthritis, and will exhibit a film showing some hydrological methods. The meeting will be preceded by a simple dinner at 8 p.m. (price 4s. 6d., payable to the secretary at the table). Morning dress. Guests, including ladies, will be very welcome. Members who intend to be present at the dinner are asked to notify the hon. secretary, Dr. Cedric Hilliard, 6, Seymour Street, W.1, and to state the number of their guests.

METROPOLITAN COUNTIES BRANCH: WILLESDEN DIVISION.—A meeting of the Willesden Division will be held at the Willesden General Hospital, N.W.10, on Wednesday, March 19th, at 9 p.m. Dr. R. A. Hickling of the Charing Cross Hospital Gastric Clinic will read a paper on the non-operative treatment of peptic ulcer.

MIDLAND BRANCH: CHESTERFIELD DIVISION.—A meeting of the Chesterfield Division will be held at the Maternity Hospital to-day (Friday, March 14th) at 8.15 p.m. Mr. M. H. Phillips, honorary surgeon to the Jessop Hospital for Women, Sheffield, will give an address on problems in midwifery.

NORTH OF ENGLAND BRANCH.—The annual dinner of the North of England Branch will be held at the Central Station Hotel, Newcastle-on-Tyne, on Thursday, March 20th, at 7.30 p.m. Dr. T. Eustace Hill (president of the Branch, 1921-22, and medical officer of health for the county of Durham) will be the guest of the evening. Application for tickets (price 10s. 6d.) should be sent to the honorary secretary, Mr. Norman Hodgson, 7, Windsor Terrace, Newcastle-on-Tyne.

NORTH OF ENGLAND BRANCH: BISHOP AUCKLAND DIVISION.—The annual dinner of the Bishop Auckland Division will be held in the King's Café, Bishop Auckland, on Friday, March 21st, at 7.30 for 8 p.m. (Tickets one guinea each, inclusive of wines.) Guests may be invited.

NORTH OF ENGLAND BRANCH: DURHAM DIVISION.—A meeting of the Durham Division will be held on Tuesday, March 18th. Mr. Hamilton Barclay will speak on diseases of the rectum and colon.

NORTH OF ENGLAND BRANCH: TYNESIDE DIVISION.—The annual business meeting of the Tyneside Division will be held at 7, Northumberland Square, North Shields, on Friday, March 21st.

OXFORD AND READING BRANCH: OXFORD DIVISION.—A clinical meeting of the Oxford Division will be held at the Radcliffe Infirmary on Thursday, March 27th, at 2.30 p.m.

SOUTHERN BRANCH: JERSEY DIVISION.—A meeting of the Jersey Division will be held at the General Hospital on Thursday, March 20th, at 8.30 p.m. Dr. T. Warrington will read a paper on *x* rays and diagnosis.

SOUTHERN BRANCH: PORTSMOUTH DIVISION.—A meeting of the Portsmouth Division will be held at the Queen's Hotel, Southsea, to-day (Friday, March 14th) at 9.30 p.m., preceded by a supper at 9 o'clock (charge 3s. 6d., including gratuities). An address will be given by Sir Thomas Horder, Bt., K.C.V.O., entitled "Orange juice, chiropractic, and the laying on of hands." Members of other Divisions will be heartily welcome.

SOUTHERN BRANCH: SOUTHAMPTON DIVISION.—A general meeting of the Southampton Division, to which all members of the local medical profession are cordially invited, will be held at the Royal South Hants and Southampton Hospital on Wednesday, March 19th, at 8.45 p.m. Agenda: Correspondence; nomination of vice-president of the Southern Branch; lecture by Dr. M. R. Taylor, "Modern magic, witchcraft, charms cures, and customs in East Anglia."

SOUTH-WESTERN BRANCH.—An intermediate meeting of the South-Western Branch will be held at Truro on Tuesday, March 25th. Members are requested to notify the honorary secretary at their earliest convenience of any cases, notes, papers, specimens, or notices of motion they may wish to bring forward, in order that they may be placed on the agenda paper. It is advisable that papers should be as short as possible.

SURREY BRANCH: CROYDON DIVISION.—A meeting of the Croydon Division will be held at the Croydon General Hospital on Tuesday, March 18th, at 8.30 p.m. Dr. J. L. Birley will read a paper on cerebral tumours.

SURREY BRANCH: REIGATE DIVISION.—A meeting of the Reigate Division will be held at the East Surrey Hospital, Redhill, on Tuesday, March 18th, at 8.45 p.m. Mr. E. C. Lindsay, will read a paper on the surgical treatment of gastric disorders.

SUSSEX BRANCH: BRIGHTON DIVISION.—A clinical meeting of the Brighton Division will be held at the Children's Hospital on Thursday, March 20th, at 3.45 p.m.

WEST SOMERSET BRANCH.—A meeting of the West Somerset Branch will be held at the Taunton and Somerset Hospital, Taunton, on Tuesday, March 25th, at 3.30 p.m. Mr. E. Watson-Williams, honorary surgeon in charge of the ear, nose, and throat department, Royal Infirmary, Bristol, will read a paper on foreign bodies in the gullet, illustrated by lantern slides and a cinematograph film.

YORKSHIRE BRANCH: BARNSLEY DIVISION.—A meeting of the Barnsley Division will be held at the Central Café, Market Street, Barnsley, on Thursday, April 3rd. Dr. E. F. Skinner (Sheffield) will give an address.

Meetings of Branches and Divisions.

BORDER COUNTIES BRANCH.

A MEETING of the Border Counties Branch was held at the County Hotel, Carlisle, on February 20th, when Dr. C. W. GRAHAM, president, was in the chair, and thirty-four members and medical guests were present.

Sir JAMES BARR delivered a British Medical Association Lecture entitled "The preservation of a healthy and efficient circulatory system from childhood to advanced age." A very hearty vote of thanks was, on the motion of Mr. NORMAN MACLAREN, seconded by Dr. MURRAY B. STEUART, accorded the lecturer for his address.

Votes of condolence were passed with the relatives of Drs. J. Cromie and Hewitson, who had recently died.

The dinner which followed was attended by sixty members and guests, including ladies, and was a very great success.

EDINBURGH BRANCH.

THE clinical meeting and dinner of the Edinburgh Branch was held on February 26th. A large number of members and guests attended the clinical demonstration of cases at the Royal Infirmary shown by members of the staff. The programme arranged by Mr. W. A. Cochrane was a most attractive one, and was much appreciated. On the motion of the president, Dr. NORMAN P. FAIRFAX, who was in the chair, a vote of thanks was accorded to the Infirmary authorities and staff.

Members and guests dined in the Scottish House in the evening, when fifty were present. Dr. FAIRFAX, who presided, proposed the toast of "The Association"; the SCOTTISH SECRETARY replied, urging the members to study the situation which had arisen in connexion with recent legislation, and to make their views known. An excellent musical programme was provided by Dr. J. G. Tait and friends. In all respects this was a most successful meeting, and was thoroughly enjoyed by those who availed themselves of the opportunity.

GLASGOW AND WEST OF SCOTLAND BRANCH: GLASGOW DIVISION.

A MEETING of the Glasgow Division was held on February 19th, when thirty-one members attended to discuss the superannuation of panel practitioners and the capitation fee.

The following were elected as Representatives in the Representative Body: Drs. W. J. Richard, A. A. Dewar, T. Russell, Marion Gilchrist, A. K. Chalmers, Armstrong, John Henderson, and McKail. Deputy Representatives: Drs. J. S. Aitken, Amy Fleming, James Craig, Ian Murray, Livingston, and Primrose. Dr. J. Inglis Cameron was appointed charities secretary.

The following resolution was passed:

> That in the opinion of the Glasgow Division all appointments for medical officers under public health services should be publicly advertised and made by the local authority.

LANCASHIRE AND CHESHIRE BRANCH: HYDE DIVISION.

A MEETING of the Hyde Division was held on February 19th in the Hyde Town Hall, when Dr. JAMES HOWARD was in the chair.

A demonstration was given by Sir ROBERT JONES, Bt., on his methods of treatment of the commoner fractures. Fifty-one members and guests from neighbouring Divisions were present, and were a highly appreciative audience.

On the motion of Mr. RODOCANACHI, seconded by Mr. RALPHS, a hearty vote of thanks was accorded the lecturer for his very useful and most interesting demonstration.

LANCASHIRE AND CHESHIRE BRANCH: ROCHDALE DIVISION.

A MEETING of the Rochdale Division was held at the Rochdale Infirmary on February 12th, when Dr. E. H. Cox, D.S.O., was in the chair and fifteen members were present. The SECRETARY presented the annual report, and drew attention to the poor response on the part of the members to the appeal on behalf of medical charities. It was decided to issue copies of the questionary sent out by the Manchester Division to the members of the Rochdale Division.

A most interesting lecture on some aspects of the anaemias was given by Dr. W. J. S. REID, physician to Ancoats Hospital, Manchester. Dr. Reid first outlined the principles of approach in considering a case of anaemia, and emphasized the fact that this condition was a symptom of a disease of the organs responsible for blood formation or blood destruction. In extrauterine life these were, so far as was known at present, the red bone marrow, the lymphatic system, and the spleen. He then referred to the position of the reticulo-endothelial system in the consideration of any blood disease, and gave a brief description of Piney's theories, regarding the persistence of embryological elements in the blood in some of the diseases. He used pernicious anaemia and aplastic anaemia to illustrate the basic ideas of anaemia which he had described, and drew attention to some important considerations in the diagnosis and treatment of pernicious anaemia.

The lecture was followed with the closest interest, and in the subsequent vote of thanks expression was given to the feeling of all present that their ideas on the anaemias had been greatly widened and clarified by Dr. Reid's lucid and witty account.

METROPOLITAN COUNTIES BRANCH: LEWISHAM DIVISION.

A MEETING of the Lewisham Division was held at the Town Hall, Catford, S.E.6, on February 18th, when the chairman of the Division, Dr. G. W. CHARSLEY, presided. Dr. A. HOPE GOSSE gave a lantern demonstration of chest diseases; the slides, which had been made during the past six months by the teleradiogram process, produced very clear definition. Dr. Gosse expressed the belief that the intravenous injection of sanocrysin in doses of 0.05 to 0.1 gram caused tubercle bacilli to disappear from the sputum, while phrenic avulsion stopped the persistent irritating cough. Offensive sputum in bronchiectasis was drained away night and morning, the body being on the bed while the head and hands were lowered near the floor, on which was placed a vessel to receive the sputum. Thoracoplasty was helpful in resting the lung. The diagnosis of spontaneous pneumothorax was made by remembering that on the sound side a healthy note could be heard and there was a normal air entry; and on the affected side a good note coexisted with no air entry. The bell note was rarely present. In the subsequent discussion Drs. BUCHAN, CHARSLEY, HALLINAN, HUDSON EVANS, and BANNOUNAH took part. A vote of thanks was acorded to Dr. Gosse for his interesting and instructive lecture.

Dr. TAYLOR informed the meeting that no successor to Dr. Lewis had been appointed, and the following resolution was passed:

> That this Division requests the Central Ethical Committee to continue the notice in the *British Medical Journal* until the date when the guardians retire from office.

The CHAIRMAN made an appeal for further support of the medical charities.

METROPOLITAN COUNTIES BRANCH: WILLESDEN DIVISION.

A CLINICAL meeting of the Willesden Division was held on February 13th, at the Willesden General Hospital, when Dr. J. STANLEY WHITE gave a cinematograph demonstration on the production of biological products. The preparation of antidiphtherial serum in its various stages was illustrated. The culture of the bacillus, the preparation of the exotoxin and its injection into the horse, the collection of the blood containing the antitoxin, the preparation, concentration, and standardization of the antitoxin were all shown. The detailed stages in the preparation of calf lymph were similarly depicted. Dr. White drew particular attention to the great value in many cases of antistreptococcal, anthrax, and antitetanic serums; he also described the importance of the Schick and the Dick tests.

A hearty vote of thanks was accorded to Dr. White for a very instructive demonstration, on the motion of Dr. A. G. TROUP, seconded by Dr. F. M. HARVEY.

NORTH OF ENGLAND BRANCH: SOUTH SHIELDS DIVISION.

THE monthly meeting of the South Shields Division was held in the Royal Hotel, South Shields, on February 11th, when Dr. O'CALLAGHAN was in the chair.

It was decided to ask Dr. D. Wells Patterson of Newcastle-upon-Tyne to deliver a lecture on nephritis, its diagnosis, prognosis, and treatment, at the meeting of the Division on March 4th.

Dr. C. A. WILSON read a paper on seven years' experience in medicine, which was followed by a general discussion. On the motion of Dr. O'CALLAGHAN, seconded by Dr. GRANT, a vote of thanks was accorded to Dr. Wilson.

NORTH OF ENGLAND BRANCH: DURHAM DIVISION.

THE Durham Division had a clinical meeting on February 18th, when Dr. J. SPENCE read a paper entitled "Some medical emergencies in childhood."

SOUTHERN BRANCH: PORTSMOUTH DIVISION.

THE fifth scientific meeting of the session of the Portsmouth Division was held at the Queen's Hotel, Southsea, on February 13th, when the chairman, Dr. WARREN, presided, and forty-two members were present, of whom twenty-nine sat down to the preceding supper.

A vote of thanks to Dr. McAskie was unanimously passed for the devotion that he had shown to the interest of members during the years he had been their representative at the Representative Meeting. Owing to his unavoidable resignation the following were elected:

Representatives, Drs. Warren and Jeans. *Deputy Representatives*, Drs. Philip Green and Gittings.

Dr. J. A. D. RADCLIFFE, pathologist to the Royal Portsmouth Hospital, gave an address on pathological examinations as an aid in diagnosis. The value of the Widal test was discussed, and some of the difficulties in the interpretation of the findings were mentioned, especially in connexion with patients who had had antityphoid inoculation. Before the seventh day of the illness a blood culture should be preferred to the Widal test. A short account of

the Wassermann test was given, and its importance in diagnosis was emphasized. Dr. Cambell's needle was recommended as the best instrument for collecting blood. The importance of blood pictures was discussed in the diagnosis of a number of the acute infective diseases. In connexion with the clinical examination of cases of albuminuria the urea concentration test was specially recommended, and also the value of glucose tolerance curves in the diagnosis of doubtful cases of diabetes. Laboratory tests for pregnancy were described.

The following took part in the ensuing discussion: Drs. UNA MULVANEY, BLACKMAN, CAMBELL, LYTLE, BOSWORTH WRIGHT, MEARNS FRASER, BEATON, SHARP, MESSRS. RIDOUT, COWPER TAMPLIN, and INMAN. On the motion of Dr. JEANS, seconded by Dr. UNA MULVANEY, a hearty vote of thanks was accorded to Dr. Radcliffe.

Dr. Warren collected £1 10s. for the Medical Charities Fund.

SOUTH MIDLAND BRANCH: NORTHAMPTONSHIRE DIVISION.

A GENERAL meeting of the Northamptonshire Division was held at the Northampton General Hospital on February 13th, when Professor D. P. D. WILKIE of Edinburgh gave an address on acute intestinal obstruction, of which an abstract appeared in the *Journal* of February 22nd (p. 337). The meeting was a very great success; 64 were present and, in addition, 16 of the senior nursing staff, the total of 80 being probably a record attendance. The paper was intensely interesting and valuable, and a short discussion followed.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.

A CLINICAL meeting of the South Wales and Monmouthshire Branch was held at the Swansea General Hospital on February 6th, when Dr. ALBAN EVANS showed a series of cases after operation.

(1) The first patient, aged 43, had had nasal obstruction, due to an adenocarcinoma of columnar cell origin. Lateral rhinotomy was performed and the growth was found to extend into the antrum and ethmoid region; it was removed, with the inner wall of the antrum, and three weeks later 50 mg. of radium were inserted for twenty-four hours. At present the nose was clear of growth, but a small fistula persisted. Dr. Evans described Moure's operation of lateral rhinotomy, and discussed its advantages as compared with resection of the upper jaw. (2) The second patient, aged 60, had a large ulcerating epithelioma involving the base of the tongue, left tonsil, and soft palate; it was associated with a hard mass of glands which was not fixed. The teeth were removed and four days later the glands were excised, the external carotid artery and internal jugular vein being ligatured. The growth was destroyed by diathermy and the condition was satisfactory six months later. (3) A patient, aged 70, had a warty epitheliomatous growth on the middle of the right vocal cord, which did not infiltrate it or affect its movement. Thyrotomy was performed and the vocal cord removed as far as the vocal process. Recovery was uneventful; three months later there was no sign of recurrence, the voice being strong and clear. (4) Dr. Evans showed a second case of epithelioma of the larynx after operation, the anterior end of the left vocal cord being affected by a subglottic malignant extension. Thyrotomy was performed and the growth was removed; six months later there was no recurrence. (5) A patient, aged 62, had a smooth rounded lymphosarcoma, originating in the right tonsil, and extending along the base of the tongue to the epiglottis. The tumour and tonsil were enucleated, and radium treatment followed; a year later the condition was satisfactory.

MR. HOWELL W. GABE reported a case of diffuse hypertrophy of both breasts in a girl. In August, 1928, when she was 13 years old, both breasts began to enlarge, and in the course of twelve months extended down to just below the anterior superior spines, causing pain, dyspnoea, and palpitation. The right breast was amputated in August, 1929, and weighed 9 lb. The left was excised two months later, and weighed 10 lb. Recovery was uneventful: menstruation commenced in December, 1929, and had been regular since.

DRS. ROLAND WILLIAMS and A. F. SLADDEN reported a case of *Brucella abortus* infection in a farmer, serological proof being obtained. Manipulation of an infected cow had probably caused infection of the skin of the hand or arm. Many cases of epizootic abortion among the cattle of the neighbourhood had occurred recently. The patient recovered.

MR. LEONARD ISAAC read a short paper on radium therapy in major surgery, and commented on the post-graduate course at St. Bartholomew's Hospital. He showed several cases of carcinoma of the breast, tongue, mouth, and lip which had benefited so far.

Dr. J. M. MORRIS showed cases of foot deformity of aggravated degree, which had been seen at the Neath public health clinic. The results of mid-tarsal resection had been good. Dr. Morris appealed to the audience to enlighten the large number of adults who still thought that nothing could be done to relieve the pain and disability in such cases.

Dr. D. E. EVANS showed three cases of chronic hereditary oedema (Milroy's disease). The first patient, who was a married woman, aged 46, presented the typical firm oedema, involving the feet, legs, and two-thirds of the thighs, the skin and subcutaneous tissue in the lower third of the legs being thrown into folds. There had been recurrent attacks of fever since the age of 13, associated with fits of shivering and often with headache and vomiting. Five years ago this patient's daughter, then aged 13, noticed that her own legs were swelling: she now had a symmetrical hard oedema of the feet and legs, terminating at the knees. There was no history of febrile attacks in this case. The third patient, a girl, aged 12, five years previously had had a persistent swelling of the legs, with acute attacks of pain in the limbs, and some tenderness.

Correspondence.

EXCESSIVE PRESCRIBING.

SIR,—I have recently been fined £10 for prescribing cod-liver oil "as a food and not as a drug." I pleaded guilty. In standard textbooks of pharmacology cod-liver oil is described as a food for wasted and debilitated individuals, and I used it for this purpose. I can imagine few things more extravagant than to use cod-liver oil as a medium of administration for its minute drug contents. I put these points, which seem to me to be incontrovertible, before the Panel Committee, who found me guilty, and before the Minister of Health, who pronounced the penalty, but all to no purpose.

Subsequently I again wrote to the Minister of Health, and asked him to be so good as to give me some guidance as to the kind of cases which were, in his opinion, suitable, under the Insurance Act, for the administration of cod-liver oil as a drug. I pointed out that since the imposition of his penalty I had been in difficulty in dealing with the requirements of my panel patients by the absence of this guidance. The Minister of Health, notwithstanding all the excellent brains at his disposal, is apparently unable to find an answer to this question, for up to the present, after an interval of six months, he has made no reply.

A case might be made out for fining a practitioner for prescribing more cod-liver oil than the State can afford to pay for. If financial conditions make it necessary, a limit might be placed on the amount of cod-liver oil a practitioner is allowed to prescribe. Such a plan would not offend the reason. But to impose a fine for using cod-liver oil in the manner prescribed in standard textbooks, and for not using it in a manner which is repugnant to the mind of any sane and economical prescriber, is subjecting the medical profession to the reign of bureaucratic lunacy.

I have not, as I have said, had the advantage of receiving any advice from the Minister of Health. He has deducted the £10 without giving any enlightenment as to the nature of the offence to a puzzled and inquiring practitioner. It may be that—contrary, I believe, to the general opinion—he classes vitamin A as a drug, and on this ground would sanction the use of cod-liver oil for the same sort of cases for which it was used by me. In that case I used cod-liver oil as a drug, I did not use it as a food. I was therefore the victim of an untrue verdict and of a wrongly inflicted penalty. The London practitioners who were fined £100 can make the same claim.—I am, etc.,

Quarry Bank, March 8th. F. MAYLETT SMITH.

SIR,—To come down to brass tacks. If the four penalized practitioners had to supply the medicines themselves at the same ratio as the Drug Fund, would they give cod-liver oil and malt so lavishly? I doubt it. It is open to query whether they were building up the patients or the practice. It is easy to have high ideals at other people's expense, but not fair to other practitioners to exploit the Drug Fund. I have lost patients because I have refused to order cod-liver oil and malt, which I knew would be given to the children.—I am, etc.,

Maldby, March 10th. E. E. DUFFY.

DENTAL BOARD.

AT a meeting of the Dental Board of the United Kingdom (in committee of the whole Board), held on February 11th under the chairmanship of the Right Hon. Sir Francis Dyke Acland, the question was considered on a communication from the War Office of a modification of the amount of annual retention fee paid by army dental officers serving on establishments outside the United Kingdom. The Board considered the matter sympathetically, and instructed its Finance Committee to consider the effect that the reduction in fees for practitioners in the Royal Navy and Army Dental Corps would have on the finances of the Board.

The Board approved University College Hospital as a dental school at which a course of instruction for dental nurses who might do minor dental work could be given.

A draft bill for the registration of dental practitioners in Bombay, communicated by the Bombay Medical Council, was considered, and a number of suggestions were made for amendment and fresh inclusions.

VACANCIES.

BIRMINGHAM: GENERAL HOSPITAL.—(1) Two Anaesthetists. (2) Three House-Surgeons. Salary for (1) £120 per annum and for (2) £70 per annum.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—Resident Surgical Officer. Salary £150 per annum.

BIRMINGHAM: ROYAL CRIPPLES HOSPITAL.—Honorary Consulting Physician.

BIRMINGHAM UNION.—Junior Assistant Medical Officers (males) at Dudley Road Hospital. Salary £200 per annum.

BRIDLINGTON BOROUGH.—Medical Officer of Health and School Medical Officer. Salary £800 per annum.

BRIGHOUSE BOROUGH.—Medical Officer of Health and School Medical Officer for Brighouse, Medical Officer of Health Hipperholme Urban District, Medical Officer of Health Halifax Rural District, and Medical Superintendent Brighouse Joint Hospital Board. Total salary £850 per annum.

BRIGHTON: ROYAL SUSSEX COUNTY HOSPITAL.—(1) House-Surgeon (male). Salary £150 per annum. (2) Honorary Clinical Assistant to the Ophthalmic Department.

BOURNEMOUTH: ROYAL VICTORIA AND WEST HANTS HOSPITAL.—House-Surgeon (male) at Poole Road Branch. Salary £120 per annum.

BURNLEY: VICTORIA HOSPITAL.—House-Physician (male). Salary £125 per annum.

BURY INFIRMARY.—(1) Senior House-Surgeon. (2) Third House-Surgeon. Salary £250 and £150 per annum respectively.

BUXTON: DEVONSHIRE HOSPITAL.—Assistant House-Physician. Salary £150 per annum rising to £175 after three months.

CAMBRIDGE: ADDENBROOKE'S HOSPITAL.—(1) House-Physician (2) Two House-Surgeons. Males, unmarried. Salary £130 per annum each.

CHARING CROSS HOSPITAL, W.C.2.—Assistant Physician (male).

CHESTER: COUNTY MENTAL HOSPITAL.—Fourth Assistant Medical Officer (male, unmarried). Salary £350 per annum, with additional £50 if possessing D.P.M.

CONNAUGHT HOSPITAL FOR WALTHAMSTOW, WANSTEAD AND LEYTON, Orford Road, E.17.—(1) Senior Resident House-Surgeon. (2) Junior Resident House-Surgeon. Males. Salary £150 and £100 per annum respectively.

DERBYSHIRE ROYAL INFIRMARY, Derby.—Ophthalmic House-Surgeon and Resident Anaesthetist. Salary £150 per annum.

DUDLEY: GUEST HOSPITAL.—Assistant House-Surgeon (male). Salary £150 per annum.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, E.1.—Whole-time Casualty Officer (male). Salary £125 per annum.

EYLES AND PATRICROFT HOSPITAL, near Manchester.—House-Surgeon. Salary £125 per annum.

EDINBURGH: ELSIE INGLIS MEMORIAL MATERNITY HOSPITAL.—House-Surgeon (female).

EDINBURGH HOSPITAL FOR CRIPPLED CHILDREN.—Surgeon. Total emoluments £1,000 a year.

EDINBURGH HOSPITAL FOR WOMEN AND CHILDREN.—Junior House-Surgeon (female).

FREEMASONS HOSPITAL AND NURSING HOME, 237, Fulham Road, S.W.3.—Radiologist.

GUILDFORD: ROYAL SURREY COUNTY HOSPITAL.—House-Surgeon. Salary £150 per annum.

HERTFORDSHIRE COUNTY COUNCIL.—Assistant Medical Officer at the County Sanatorium, Ware Park. Salary £250 per annum.

HOVE: LADY CHICHESTER HOSPITAL.—Junior House-Physician. Honorarium £50 per annum.

HULL ROYAL INFIRMARY.—(1) House-Surgeon to Special Departments. (2) Casualty House-Surgeon. Salary £150 and £120 per annum respectively.

IPSWICH COUNTY BOROUGH.—Assistant Medical Officer (unmarried) to the Ipswich Sanatorium. Salary £350 per annum.

IPSWICH: EAST SUFFOLK AND IPSWICH HOSPITAL.—Two House-Surgeons. Salary £120 per annum.

KENSINGTON, FULHAM, AND CHELSEA GENERAL HOSPITAL.—Casualty (Resident) Medical Officer. Salary £100 per annum.

LEEDS PUBLIC DISPENSARY.—Junior Resident Medical Officer. Salary £150 per annum.

LIVERPOOL: HAHNEMANN HOSPITAL.—Resident Medical Officer. Salary £100 per annum.

LIVERPOOL OPEN AIR HOSPITAL FOR CHILDREN, Leasowe.—Junior Medical Officer. Salary £150 per annum.

LIVERPOOL: ROYAL SOUTHERN HOSPITAL.—(1) House-Physician. (2) House-Surgeon. (3) Medical Officer to take charge of special departments. (4) Casualty Officer. Salary for (1), (2), and (3), £60 per annum, and for (4), £100 per annum.

LONDON COUNTY COUNCIL.—(1) Medical Superintendents in the Public Health Department. Salaries £750—£1,000 per annum. (2) Assistant Aurist (part-time); remuneration £1 14s. 6d. per session.

LONDON HOSPITAL, E.1.—Assistant Radiologist.

LONDON LOCK HOSPITAL.—(1) First and Second House-Surgeons at the Male Lock Hospital. (2) Surgical Registrar at the Male Lock Hospital. (3) Surgical Registrar at the Female Lock Hospital. Salary for (1) £200 and for (2) and (3) £100 per annum.

LONDON TEMPERANCE HOSPITAL, Hampstead Road, N.W.1.—(1) Resident Medical Officer. (2) House-Physician. Salary £175 and £100 per annum respectively.

LOUGHBOROUGH AND DISTRICT GENERAL HOSPITAL AND DISPENSARY.—Resident House-Surgeon (female, unmarried). Salary £150 per annum.

LOWESTOFT AND NORTH SUFFOLK HOSPITAL.—Junior House-Surgeon (male). Salary £120 per annum.

MACCLESFIELD GENERAL INFIRMARY.—Second House-Surgeon (male). Salary £150 per annum.

MANCHESTER: ANCOATS HOSPITAL.—Resident Surgical Officer. Salary £200 per annum.

MANCHESTER BABIES' HOSPITAL, LEVENSHULME.—Junior Resident Medical Officer. Salary £50 per annum.

MANCHESTER: ROYAL MANCHESTER CHILDREN'S HOSPITAL.—Assistant Physician. Honorarium £50 per annum.

MANOR HOUSE HOSPITAL, Golders Green, N.W.11.—House-Surgeon (male, unmarried). Salary £200 per annum.

METROPOLITAN HOSPITAL, Kingsland Road, E.8.—Physician to the Department for Diseases of the Skin.

MIDDLESBROUGH: NORTH RIDING INFIRMARY.—Second and Third House-Surgeons (males). Salary £150 and £125 per annum respectively.

NEWCASTLE-UPON-TYNE: HOSPITAL FOR SICK CHILDREN.—(1) Resident Senior House-Surgeon. (2) Resident House-Physician. (3) Junior House-Surgeon (non-resident). Salary for (1) and (2) £85 and for (3) £100 per annum.

NEWCASTLE-UPON-TYNE: ROYAL VICTORIA INFIRMARY.—Resident Medical Officer (male). Salary £250 rising to £300 per annum.

NEW ZEALAND: WELLINGTON HOSPITAL BOARD.—Radiologist at the Wellington General Hospital. Salary £900 per annum, rising to £1,050.

NORFOLK AND NORWICH HOSPITAL, Norwich.—Honorary Assistant Surgeon.

NOTTINGHAM CITY COUNCIL.—Resident Medical Superintendent at the City Infirmary. Salary £900 per annum, rising to £1,000.

NOTTINGHAM: GENERAL HOSPITAL.—Second Casualty Officer (male). Salary £150 per annum.

PORTSMOUTH PARISH.—Third Assistant Resident Medical Officer for St. Mary's Hospital, Institution and Children's Home. Salary £250 per annum.

PRINCE OF WALES'S HOSPITAL, Tottenham, N.15.—(1) Honorary Physician. (2) Senior House-Physician. (3) Senior House-Surgeon. (4) Special House-Surgeon. (5) Junior House-Physician. (6) Two Junior House-Surgeons. Salary for (2), (3), and (4) £120 per annum and for (5) and (6) £90 per annum.

ROAN ANTELOPE COPPER MINES LTD.—Second Medical Officer in Northern Rhodesia. Salary £900—£1,000 a year.

RUGBY: HOSPITAL OF ST. CROSS.—Senior and Junior Resident Medical Officers (males). Salary £150 and £100 per annum respectively.

ST. MARY'S HOSPITAL, W.2.—(1) Obstetric Registrar; honorarium £50 per annum. (2) Clinical Assistant in the X-Ray Department; honorarium as senior £100 and as junior £50 per annum.

SALFORD CITY.—Junior Assistant Resident Medical Officer (male) to the Infectious Diseases Hospital. Salary £200 per annum.

SALFORD ROYAL HOSPITAL.—(1) House-Physician. (2) Two House-Surgeons. (3) Casualty House-Surgeon. Salary £125 per annum.

SEAMEN'S HOSPITAL SOCIETY.—(1) House-Physician and House-Surgeon at the Dreadnought Hospital. (2) Medical Officer at Albert Dock Hospital. (3) Two House-Physicians at Hospital for Tropical Diseases, Endsleigh Gardens, W.C.1. Males. Salary for (1) and (2) £110 per annum and a proportion of fees, and for (3) £150 per annum.

SHEFFIELD: ROYAL INFIRMARY.—Ophthalmic House-Surgeon. Salary £80 per annum, rising to £100 after six months.

SHREWSBURY DISPENSARY.—Medical Officer.

SHROPSHIRE ORTHOPAEDIC HOSPITAL AND AGNES HUNT SURGICAL HOME, Oswestry. Two House-Surgeons (males). Salary £100 per annum.

SOCIETY OF APOTHECARIES OF LONDON.—Whole-time Medical Registrar. Salary £500 per annum rising to £800.

STIRLING DISTRICT MENTAL HOSPITAL, Larbert.—Junior Assistant Medical Officer (male). Salary £300 per annum.

STORNOWAY: LEWIS HOSPITAL.—Surgeon Superintendent. Salary, etc., £1,050.

WALSALL GENERAL HOSPITAL.—Casualty House-Surgeon. Salary £120 per annum.

WALTHAMSTOW BOROUGH.—Medical Officer of Health, Superintendent of the Isolation Hospital, School Medical Officer, and Maternity and Child Welfare Officer. Salary £1,100.

WEST BROMWICH AND DISTRICT GENERAL HOSPITAL.—Casualty House-Surgeon (male, unmarried). Salary £200 per annum.

WEST BROMWICH: HALLAM HOSPITAL.—Resident House-Surgeon and Resident House-Physician. Salary £250 per annum.

WEST LONDON HOSPITAL, Hammersmith, W.6.—(1) Honorary Medical Registrar; honorarium £100 per annum. (2) Honorary Obstetric Registrar. (3) Honorary Assistant Surgeon.

WOOLWICH AND DISTRICT WAR MEMORIAL HOSPITAL.—(1) House-Physician. (2) House-Surgeon. Honorarium £125 per annum each.

CERTIFYING FACTORY SURGEONS.—The following vacant appointments are announced: Ramsey (Hunts), Llandudno (Carnarvon) and Rhayader (Radnor). Applications to the Chief Inspector of Factories, Home Office, Whitehall, S.W.1.

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column advertisements must be received not later than the first post on Tuesday morning.

APPOINTMENTS.

AITKEN, Charles J. Hill, M.D., Medical Officer to Kilnhurst Child Welfare Centre and School Clinic.

CAMPBELL, J. M. H., M.D.Oxf., F.R.C.P., Physician to Out-patients, National Hospital for Diseases of the Heart, Westmoreland Street, W.

EMSLIE, Ethel R., M.B., Ch.B., D.P.H.Aberd., Fourth Resident Assistant Medical Officer, Booth Hall Infirmary for Children, Manchester, E.

IREDELL, C. E., M.D.Lond., M.R.C.P.Lond., Physician in Charge of the Electro-therapeutic Department, Freemasons Hospital and Nursing Home, Fulham Road, S.W.

HANNA, Margaret Robb, M.B., B.Ch., B.A.O., D.P.H.Belf., Assistant Medical Officer of Health for Maternity and Child Welfare to the County Borough of Walsall.

PEARCE, C. N., M.B., B.S.Lond., F.R.C.S., Honorary Assistant Surgeon, Blackburn and East Lancashire Royal Infirmary.

RIDDELL, James W. G. H., *M.C.*, M.D., F.R.C.S.Ed., Honorary Assistant Surgeon with charge of the Obstetrical and Gynaecological Department, South Devon and East Cornwall Hospital, Plymouth, Devon.

DIARY OF SOCIETIES AND LECTURES.

ROYAL COLLEGE OF PHYSICIANS OF LONDON, Pall Mall East, S.W.1.—Tues., 5 p.m., Goulstonian Lecture by Dr. Donald Hunter: The Significance to Clinical Medicine of Studies in Calcium and Phosphorus Metabolism. Thurs., 5 p.m., Lumleian Lecture by Dr. Carey F. Coombs: Syphilis of the Heart and Great Vessels.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C.—Museum Demonstrations, Mon., 5 p.m., Mr. C. E. Shattock: Diverticula; Fri., 5 p.m., Sir Frank Colyer: Specimens illustrating Dento-alveolar Abscess and Dental Cyst.

ROYAL SOCIETY OF MEDICINE.

General Meeting of Fellows.—Tues., 5.30 p.m.: Ballot for Fellowship.

Section of Pathology.—Tues., 8 p.m., Annual General Meeting: Election of Officers and Council. Communications: W. W. C. Topley, Antibodies in Rabbits; Joan Taylor and H. D. Wright, Haemolytic Streptococci in the Normal Vagina; G. R. Cameron and B. T. Mayes, The Effect of Tying the Hepatic Artery. Demonstration: J. W. Orr, Primary Carcinoma of the Liver in a Case of Haemochromatosis.

Section of Dermatology and Medicine.—Thurs., 4 p.m., Cases. 5 p.m. Special Discussion: The Therapeutic Value of Gold Compounds, Sanocrysin, etc. Openers: Professor Lyle Cummins and Dr. A. C. Roxburgh.

Section of Balneology and Climatology.—Fri., 5 p.m., Discussion: The Influence of Sunlight and other Climatic Factors in Health and Rheumatic Diseases. Opener: Dr. Charles W. Buckley.

Section of Obstetrics and Gynaecology.—Fri., 8 p.m., Dr. J. Estcourt Hughes: A Case of Hydatidiform Mole with Multiple Synovial Infarction of the Lungs. Dr. Arthur E. Giles: The Influence of Hysteropexy on Subsequent Pregnancy and of Pregnancy on a Previous Hysteropexy. Professor W. Fletcher Shaw: The Treatment of Prolapsus Uteri.

Section of Electro-Therapeutics.—Fri., 8.30 p.m., Dr. J. M. Woodburn Morison: Diaphragmatic Hernia.

CHELSEA CLINICAL SOCIETY, Hotel Rembrandt, Thurloe Place, S.W.—Tues., 8.30 p.m., Discussion: Micturition. To be opened by Mr. J. Everidge and Sir T. Carey Evans. Preceded by dinner at 7.30 p.m.

LONDON CLINICAL SOCIETY, London Temperance Hospital, Hampstead Road, N.W.1.—Tues., 9 p.m., Clinical evening. Cases from 8.30 p.m.

ROYAL SOCIETY OF TROPICAL MEDICINE AND HYGIENE.—Thurs., 8.15 p.m., Laboratory Meeting at Royal Army Medical College, Grosvenor Road. Demonstrations.

ROYAL MICROSCOPICAL SOCIETY, 20, Hanover Square, W.1.—Wed., 7.30 for 8 p.m., Postponed presidential address by Mr. Joseph E. Barnard, F.R.S.: Resolution and Visibility in Medical Microscopy.

SOCIETY OF MEDICAL OFFICERS OF HEALTH: MATERNITY AND CHILD WELFARE GROUP, 1, Upper Montague Street, W.C.1.—Fri., 8.30 p.m., Dr. Hamilton Pearson, Fits in Children.

UNIVERSITY COLLEGE HOSPITAL MEDICAL SCHOOL, W.C.1.—Mon., 5 p.m., Sydney Ringer Memorial Lecture by Professor E. B. Verney: The Reserve Forces of the Kidney.

POST-GRADUATE COURSES AND LECTURES.

FELLOWSHIP OF MEDICINE AND POST-GRADUATE MEDICAL ASSOCIATION.—Lecture at *Medical Society*, 11, Chandos Street, W.1: Tues., 4 p.m., X-Ray Examination of the Heart: no fee. *Royal Westminster Ophthalmic Hospital*, Broad Street, W.C.2: Thurs., 2.30 p.m., Demonstration; no fee. *National Hospital for Diseases of the Heart*, Westmoreland Street, W.: Thurs., 3 p.m., Demonstration: no fee. *West End Hospital for Nervous Diseases*, 73, Welbeck Street, W.: Special post-graduate course of lectures and clinical demonstrations, daily, 5 p.m.; fee for four weeks, £2 2s. 0d. *London Lock Hospital*, Dean Street, W.1: Post-graduate course in Venereal Disease; clinical instruction daily in the afternoons and evenings for four weeks; fee £2 2s. 0d. *Royal National Orthopaedic Hospital*, Great Portland Street, W.1: Second week of post-graduate course in Orthopaedics occupying all day; fee £1 1s. 6d. Copies of all syllabuses may be obtained from the Fellowship of Medicine, 1, Wimpole Street, W.1.

CENTRAL LONDON THROAT, NOSE AND EAR HOSPITAL, Gray's Inn Road, W.C.1.—Fri., 4 p.m., Acute Affections of the Pharynx.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.3.—Mon. to Sat., Special Course on Tuberculosis, arranged by the Joint Tuberculosis Council.

KING'S COLLEGE HOSPITAL MEDICAL SCHOOL, Denmark Hill, S.E.5.—Thurs., 9 p.m., Radiology.

LONDON SCHOOL OF DERMATOLOGY, St. John's Hospital, Leicester Square, W.C.2.—Tues., 5 p.m., Mycotic Diseases. Thurs., 5 p.m., Pathology Demonstration.

NATIONAL HOSPITAL, Queen Square, W.C.1.—Mon., Tues., Thurs, and Fri., 2 p.m., Outpatient Clinics. Mon., 12 noon, Pathology of the Nervous System; 3.30 p.m., Forms of Muscular Atrophy. Tues., 3.30 p.m., Acute and Subacute Myelitis. Thurs., 3.30 p.m., Headache. Fri., 12 noon, Anatomy and Physiology of Nervous System; 3.30 p.m., Disseminated Sclerosis.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.—Mon., 2.30 to 5 p.m., Medical, Surgical, and Gynaecological Clinics, Operations. Tues., 2.30 to 5 p.m., Medical, Surgical, Ear, Nose, and Throat Clinics, Operations. Wed., 2.30 to 5 p.m., Medical, Skin, and Eye Clinics, Operations. Thurs., 11.30 a.m., Dental Clinic; 2.30 to 5 p.m., Medical, Surgical, Nose, Throat, and Ear Clinics, Operations. Fri., 10.30 a.m., Throat, Nose, and Ear Clinics: 2.30 to 5 p.m., Surgical, Medical, and Children's Diseases Clinics, Operations.

ROYAL DENTAL HOSPITAL FOR LONDON, Leicester Square, W.C.2.—Wed., 6 p.m., A Theoretical Review of Treatment of the Dentine.

SOUTH-WEST LONDON POST-GRADUATE ASSOCIATION, St. James's Hospital, Ouseley Road, Balham, S.W.—Thurs., 4 p.m., Some Points in Differential Diagnosis and Treatment in Disease of the Chest.

GLASGOW POST-GRADUATE MEDICAL ASSOCIATION.—At Royal Samaritan Hospital for Women: Wed., 4.15 p.m., Gynaecological Cases.

LIVERPOOL UNIVERSITY CLINICAL SCHOOL ANTE-NATAL CLINICS.—Royal Infirmary: Mon. and Thurs., 10.30 a.m. Maternity Hospital: Mon., Tues., Wed., Thurs., and Fri., 11.30 a.m.

MANCHESTER: ANCOATS HOSPITAL.—Thurs., 4.15 p.m., Affections of the Kidneys with special reference to Nephritis. Tea at 3.45 p.m.

MANCHESTER ROYAL INFIRMARY.—Tues., 4.15 p.m., Carcinoma of the Rectum. Fri., 4.15 p.m., Demonstration of Medical Cases. Tea at 3.45 p.m.

SHEFFIELD UNIVERSITY POST-GRADUATE CLINICS.—At Royal Infirmary, Fri., 5.30 p.m., Some Common Skin Diseases.

British Medical Association.

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Diary of the Association.

MARCH.

14 Fri. Chesterfield Division: Maternity Hospital, 8.15 p.m. Mr. M. H. Phillips on Problems in Midwifery.
City Division: Metropolitan Hospital, Kingsland Road, E., 4.30 p.m. Mr. F. C. W. Capps on Ear and Throat Cases.
Portsmouth Division: Queen's Hotel, Southsea, 9.30 p.m. Sir Thomas Horder, Bt., on Orange Juice, Chiropractic, and the Laying on of Hands.
Wigan Division: Dr. Dougal on Gynaecology.

18 Tues. London: Naval and Military Committee, 2.30 p.m.
Stratford Division: Education Offices, The Grove, Stratford, Meeting at 9.15 p.m. Discussion on the Influence of Birth Control on the Health of the Female, opened by Dr. Frederick J. McCann.
Croydon Division: Croydon General Hospital, 8.30 p.m. Dr. J. L. Birley on Cerebral Tumours.
Finchley Division: Finchley Memorial Hospital, 8.45 p.m., Mr. W. Sheldon on Rheumatism in Childhood.
Lewisham Division: Town Hall, Catford, S.E.6, 8.45 p.m. Dr. J. L. Livingstone on Some Points in the Investigation and Treatment of Asthma in Children.
Reigate Division: East Surrey Hospital, 8.45 p.m. Mr. E. C. Lindsay on the Surgical Treatment of Gastric Disorders.

19 Wed. London: Finance Committee, 2.30 p.m.
Blackpool Division: Metropole Hotel, Blackpool, 8.30 p.m. Address by Mr. Kenneth M. Walker on the Mechanism and Treatment of Prostatic Obstruction.
Hyde Division: Stalybridge Town Hall, 8.30 p.m. Papers.
Kensington Division: Kensington Palace Mansions Hotel, 8.45 p.m. General Meeting. Address by Dr. J. F. Hall's Daily on Arterial Pressure from a Clinical Aspect.
Nuneaton and Tamworth Division: Nuneaton General Hospital. Dr. L. G. J. Mackay on Focal Sepsis.
Southampton Division: Royal South Hants and Southampton Hospital, 8.45 p.m. Dr. M. R. Taylor on Modern Magic, Witchcraft, Charm Cures, and Customs in East Anglia.

20 Thurs. Brighton Division: Children's Hospital, 3.45 p.m., Clinical Meeting.
Jersey Division: General Hospital, 8.30 p.m. Dr. T. Warrington on X Rays and Diagnosis.
North of England Branch: Central Station Hotel, Newcastle-on-Tyne, 7.30 p.m. Annual Dinner.

21 Fri. London: Hospitals Committee, 2 p.m.
Bishop Auckland Division: Annual Dinner, King's Café, 7.30 for 8 p.m.
Tyneside Division: 7, Northumberland Square, North Shields. Annual Business Meeting.

25 Tues. Harrow Division: Paper by Mr. H. D. Gillies on Plastic Surgery.
Mid-Cheshire Division: Altrincham General Hospital, 8.30 p.m. B.M.A. Lecture by Dr. E. P. Poulton on Allergy or Sensitization and its Relation to Treatment.
West Somerset Branch: Taunton and Somerset Hospital, 3.30 p.m. Mr. E. Watson-Williams on Foreign Bodies in the Gullet.

27 Thurs. Oxford Division: Radcliffe Infirmary, 2.30 p.m. Clinical Meeting.
Southport Division: Assembly Room, Prince of Wales Hotel, 8.30 p.m. B.M.A. Lecture by Professor D. P. D. Wilkie on Surgery in Relation to Diseases of the Colon.

APRIL.

3 Thurs. Barnsley Division: Central Café, Market Street, Barnsley. Address by Dr. E. F. Skinner.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcement of Births, Marriages, and Deaths is 2s., which sum should be forwarded with the notice not later than the first post on Tuesday morning, in order to ensure insertion in the current issue.

BIRTHS.

HAY.—At Dera Ismail Khan, India, on March 3rd, 1930, to Major and Mrs. Robert Hay, a son.

HOBBS.—On March 9th, 1930, at 4, Downing Street, Farnham, to Elsie, wife of F. B. Hobbs, M.D., M.R.C.P., a son.

TARLTON.—On February 1st, at a nursing home, Calcutta, the wife of Edward Smedley Tarlton (Nelly Flett, M.A., M.B., Ch.B.Aberd.), a daughter.

MARRIAGE.

FULTON—DAVIES.—On March 4th, at Holy Trinity, Blackburn, James Boyd, son of the late Dr. A. Boyd Fulton of Manchester, and of Mrs. Fulton of Aberdeen, and Mary Sievwright, daughter of the late Dr. Sievwright Davies and of Mrs. Davies of Blackburn.

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